

Sub F1
cont.
F1
organometallic complex salt having a metal cation, upon photolysis, said polymerization photoinitiator liberating at least one coordination site and polymerizing the cyanate ester substance, wherein said metal cation in the organometallic complex is selected from the group consisting of elements of Periodic Groups IVB, VB, VIB, VIIB, and VIIIB.

6. The photoinduced polymerizable cyanate ester composition of claim 1, wherein said cyanate ester substance is solvent free.

Sub F2
F2
F2
(THRICE AMENDED) A process, said process comprising the steps of:
providing a cyanate ester substance consisting essentially of a cationically polymerizable cyanate ester monomer, a cyanate ester prepolymer, or a mixture of the monomer and prepolymer;
adding to the cyanate ester substance an effective amount of a filler for controlling thermal expansion of said composition and for assisting in reinforcing said bond; and
adding to the cyanate ester substance a polymerization photoinitiator comprised of a catalytically effective amount of an organometallic complex salt having a metal cation, upon photolysis, the polymerization photoinitiator liberating at least one coordination site and curing the cyanate ester substance, wherein said metal cation in the organometallic complex is selected from the group consisting of elements of Periodic Groups IVB, VB, VIB, VIIB, and VIIIB.

Sub F3
F3
8. (FOURTH AMENDED) A lead protective composition comprising the polymerization product of:
(a) at least one cyanate monomer;
(b) a polymerization photoinitiator comprised of a catalytically effective

Sub F3
cont.
B
E

- amount of an organometallic complex salt having a metal cation, the polymerization photoinitiator liberating at least one coordinative site and polymerizing the at least one cyanate monomer, wherein said metal cation in the organometallic complex is selected from the group consisting of Periodic Groups IVB, VB, VIB, VIIB, and VIIIB; and
- (c) a filler for controlling thermal expansion of said composition and for assisting in reinforcing said bond.

13. (AMENDED) The lead protective composition of claim 8, further comprising a surface treating agent selected from the group consisting of vinyltrimethoxysilane, vinyltriethoxysilane, N(2-aminoethyl)3-aminopropyl methyldimethoxysilane, 3-aminopropylethoxysilane, 3- glycidoxypropyl trimethoxysilane, 3-glycidoxypropylmethyl dimethoxysilane and combinations thereof.

14. (AMENDED) The photoinduced polymerizable cyanate ester composition of claim 1, further comprising a surface treating agent selected from the group consisting of vinyltrimethoxysilane, vinyltriethoxysilane, N(2-aminoethyl)3-aminopropyl methyldimethoxysilane, 3-aminopropylethoxysilane, 3- glycidoxypropyl trimethoxysilane, 3-glycidoxypropylmethyl dimethoxysilane and combinations thereof.

15. (AMENDED) The photoinduced polymerizable cyanate ester composition of claim 1, wherein an amount of the surface treating agent includes from about 3 to about 15 parts based on 100 parts of the resin.

16. (AMENDED) The photoinduced polymerizable cyanate ester composition of claim 1, further comprising a toughening agent selected from the group consisting of hydroxy-terminated polysulfone oligomers, elastomers, rubber, epoxy terminated elastomer, and combinations thereof.

17. The photoinduced polymerizable cyanate ester composition of claim 16, wherein said polysulfone oligomers have molecular weights ranging between approximately 500 and approximately 5000.

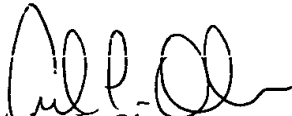
18. (AMENDED) The process of claim 7, wherein the process further comprises adding a surface treating agent selected from the group consisting of vinyltrimethoxysilane, vinyltriethoxysilane, N(2-aminoethyl)3-aminopropyl methyldimethoxysilane, 3-aminopropylethoxysilane, 3-glycidoxypropyl trimethoxysilane, 3-glycidoxypropylmethyl dimethoxysilane and combinations thereof.

CONCLUSION

Applicants submit that the entire application is in condition for allowance. However, should the Examiner believe anything further is necessary in order to place the application in better condition for allowance, or if the Examiner believes that a telephone interview would be advantageous to resolve the issues presented, the Examiner is invited to contact the Applicants' undersigned representative at the telephone number listed below.

Date: 8-21-2002

Respectfully submitted,



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Appendix - Identification of Amended Material

IN THE CLAIMS:

Please amend Claims 1, 7 and 8, 13-15, 16 and 18, and cancel Claim 2-5 and 9-12 of the above-referenced patent application as follows:

1. (FOURTH AMENDED) A [photoinduced polymerizable cyanate ester] composition [for use in reinforcing a bond], comprising:

a cyanate ester [substance] resin [comprised] consisting essentially of a cationically polymerizable cyanate ester monomer, a cyanate ester prepolymer, or a mixture of the monomer and prepolymer;

[an effective amount of modifier for enhancing fracture properties of said bond and for assisting in reinforcing said bond, wherein the modifier includes a toughener;]

a filler for controlling thermal expansion of said composition and for assisting in reinforcing said bond;

[a surface treating agent;] and

a polymerization photoinitiator comprised of a catalytically effective amount of an organometallic complex salt having a metal cation, upon photolysis, said polymerization photoinitiator liberating at least one coordination site and polymerizing the cyanate ester substance, wherein said metal cation in the organometallic complex is selected from the group consisting of elements of Periodic Groups IVB, VB, VIB, VIIB, and VIIIB.

7. (THRICE AMENDED) A process [for providing a photoinduced polymerizable cyanate ester composition for use in reinforcing a bond], said process comprising the steps of:

providing a cyanate ester substance [comprised] consisting essentially of a cationically polymerizable cyanate ester monomer, a cyanate ester prepolymer, or a mixture of the monomer and prepolymer;

[adding to the cyanate ester substance an effective amount of modifier for enhancing fracture properties of said bond and for assisting in reinforcing said bond, wherein the modifier includes a toughener;]

adding to the cyanate ester substance an effective amount of a filler for controlling thermal expansion of said composition and for assisting in reinforcing said bond;

[adding to the cyanate ester substance an effective amount of a surface treating agent;]
and

adding to the cyanate ester substance a polymerization photoinitiator comprised of a catalytically effective amount of an organometallic complex salt having a metal cation, upon photolysis, the polymerization photoinitiator liberating at least one coordination site and curing the cyanate ester substance, wherein said metal cation in the organometallic complex is selected from the group consisting of elements of Periodic Groups IVB, VB, VIB, VIIB, and VIIIB.

8. (FOURTH AMENDED) A lead protective composition comprising the polymerization product of:

- (a) at least one cyanate monomer;
- (b) a polymerization photoinitiator comprised of a catalytically effective amount of an organometallic complex salt having a metal cation, the polymerization photoinitiator liberating at least one coordinative site and

polymerizing the at least one cyanate monomer, wherein said metal cation in the organometallic complex is selected from the group consisting of Periodic Groups IVB, VB, VIB, VIIB, and VIIIB; and

- (c) a filler for controlling thermal expansion of said composition and for assisting in reinforcing said bond[;
- (d) an effective amount of a modifier for enhancing fracture properties of the protective composition as compared to a lead bond formed without a lead protective composition and for assisting in reinforcing said bond, wherein the modifier includes a toughener; and
- (e) a surface treating agent].

13. (AMENDED)The lead protective composition of claim 8, [wherein said] further comprising a surface treating agent selected from the group consisting of vinyltrimethoxysilane, vinyltriethoxysilane, N(2-aminoethyl)3-aminopropyl methyldimethoxysilane, 3-aminopropylethoxysilane, 3- glycidoxypropyl trimethoxysilane, 3-glycidoxypropylmethyl dimethoxysilane and combinations thereof.

14. (AMENDED)The photoinduced polymerizable cyanate ester composition of claim 1, [wherein the] further comprising a surface treating agent [is] selected from the group consisting of vinyltrimethoxysilane, vinyltriethoxysilane, N(2-aminoethyl)3-aminopropyl methyldimethoxysilane, 3-aminopropylethoxysilane, 3- glycidoxypropyl trimethoxysilane, 3-glycidoxypropylmethyl dimethoxysilane and combinations thereof.

15. (AMENDED)The photoinduced polymerizable cyanate ester composition of claim 1,

wherein an amount of the surface treating agent includes from about 3 to about 15 parts based on 100 parts of the [composition] resin.

16. (AMENDED) The photoinduced polymerizable cyanate ester composition of claim 1, [wherein said] further comprising a toughening agent [is] selected from the group consisting of hydroxy-terminated polysulfone oligomers, elastomers, rubber, epoxy terminated elastomer, and combinations thereof.

18. (AMENDED) The process of claim 7, wherein the process further comprises adding [of] a surface treating agent [further comprises the agent] selected from the group consisting of vinyltrimethoxysilane, vinyltriethoxysilane, N(2-aminoethyl)3-aminopropyl methyldimethoxysilane, 3-aminopropylethoxysilane, 3- glycidoxypropyl trimethoxysilane, 3-glycidoxypropylmethyl dimethoxysilane and combinations thereof.